

## TWO NEW SPECIES OF THE FAMILY PACHYLAELAPIDAE BERLESE, FROM CHINA (ACARI, MESOSTIGMATA)

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**Abstract** Two new species of Pachylaelapidae Berlese from China are described: *Pachylaelaps changbaiensis* sp. nov. from Changbai Mountain, Jilin Province and *Pachyseius huanrenensis* sp. nov. from Laotudingzi Natural Preserve, Liaoning Province.

**Key words** Acari, Pachylaelapidae, *Pachylaelaps*, *Pachyseius*, new species, China.

### Introduction

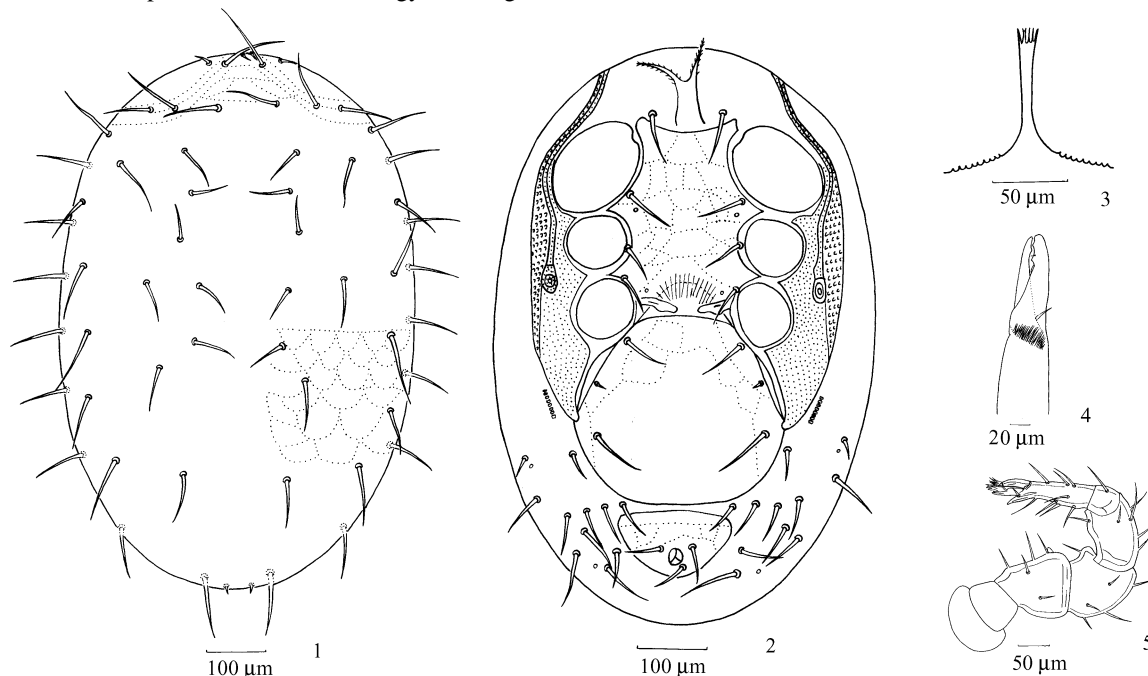
The family Pachylaelapidae was erected by Berlese in 1913 who designated *Sphaerdaelaps* Berlese, 1903 as the type genus. Bregetova et al. (1977) reported 4 genera from SSSR, some new genera were reported later (Moraza & Johnston, 1990; Halliday, 1997). Now 86 species belonging to 18 genera have been described from around the world. Two genera, *Pachylaelaps* Berlese, 1886 and *Pachyseius* Berlese, 1910, have been reported in China, and 19 species of *Pachylaelaps* and 3 species of *Pachyseius* have been described from China.

In this paper, we describe two new species of Pachylaelapidae from China. The type specimens are deposited in the Department of Entomology, College of

Plant Protection, Shenyang Agricultural University, Liaoning Province, China. All measurements, of which paratypes are showed in bracket, are given in microns ( $\mu\text{m}$ ). Idiosomal setal notation follows Zachvatkin (1948).

*Pachylaelaps changbaiensis* sp. nov. (Figs. 1-5)

**Female.** Idiosoma oval and yellow, length 880 (880-920), width 600 (580-600). Dorsal shield completed and weakly reticulated, provided with 30 pairs of long and smooth setae (except  $F_1$ ,  $F_3$ ,  $S_8$ ), all setae except  $F_1$ ,  $F_3$ ,  $S_8$  almost overlapping bases of those in rows posterior to them. Dorsal seta  $S_7$  more than 4 times of  $S_8$  in length.



Figs. 1-5. *Pachylaelaps changbaiensis* sp. nov. . 1. Dorsum. 2. Venter. 3. Tectum. 4. Chelicera. 5. Leg .

Sternal shield reticulated, provided with 4 pairs of setae and 2 pairs of lyriform pores, coalesced with endopodal shields and metasternal shields. Genitoventral shield obviously pentagon-like and weakly reticulated at

margin, length 308 (284-308), width 328 (320-336), provided with 3 pairs of setae, the second pair of setae tiny, posterior margin flat. 1 pair of spermathecae eggplant-like. Peritrematal shields with punctuation,

coalesced with parapodal shields, end of posterior margin coalesced with part of genitoventral shield, extending posteriorly around coxae. Anal shield subtriangular and weakly reticulated, length 108 (94-112), width 174 (166-178), 3 perianal setae with the same length. Anal shield closed to genitoventral shield. Metapodal shields composed of 8 platelets arranged in a line. 11 pairs of simple setae on soft cuticle.

Tectum with 5 short projections, lateral margins with spinules. Movable digit of chelicera with 1 tooth, while fixed digit with 2-3 teeth and 1 spine at base, pilus dentilis needle-like. Inner part of the terminal of femur with 1 apophyse. Terminal of tarsus with 2 spines. Male. Unknown.

Holotype, paratypes 3, from soil, Changbai Mountain (42°1'N, 128°4'E), Jilin Province, Sept. 1995, coll. YIN Sui-Gong.

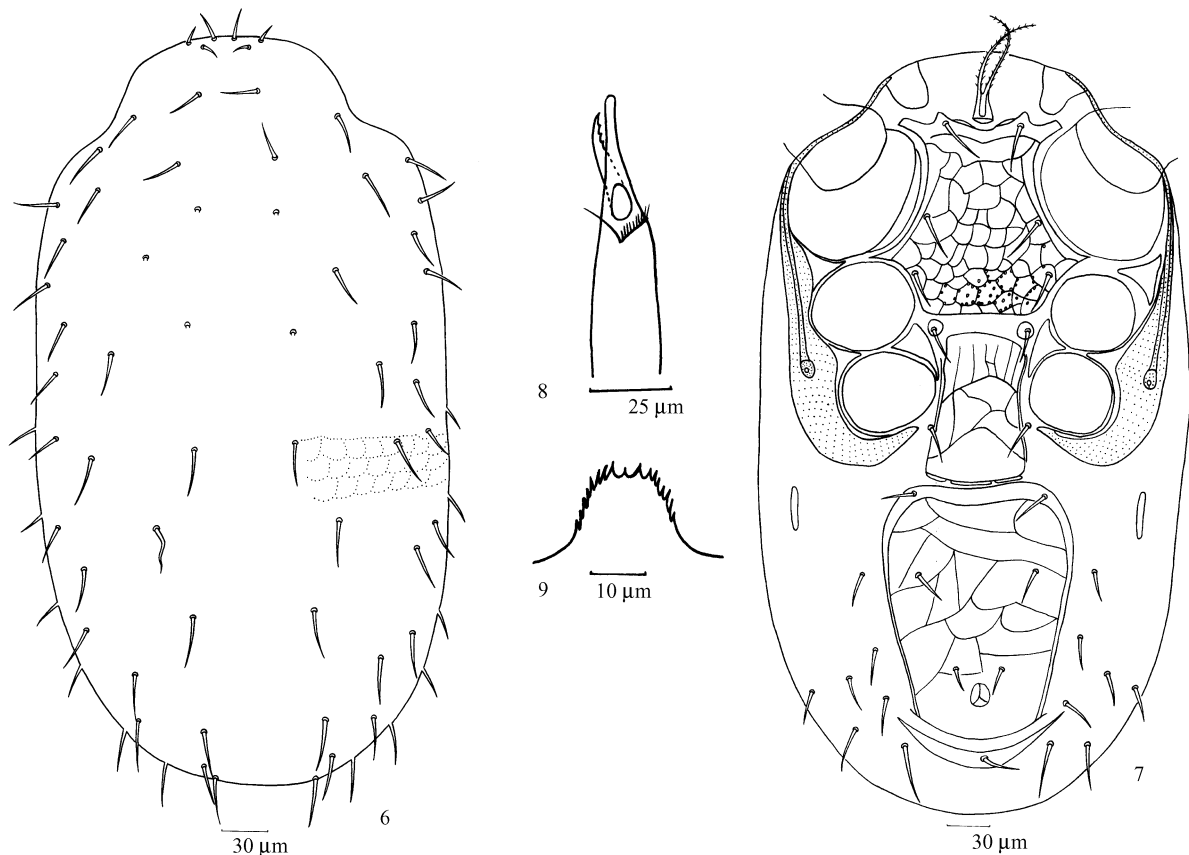
Etymology. The new species is named after the

locality where the specimens were collected, Changbai Mountain.

Remarks. The new species is similar to *Pachylaelaps grandis* Koroleva, 1977, but in the new species genitoventral shield provided with 3 pairs of setae, weakly reticulated at the margin; 3 perianal setae with the same length; peritrematal shields with punctuation; lateral margins of tectum with spinules. In the latter species genitoventral shield provided with 2 pairs of setae and obviously reticulated; posteranal seta shorter than lateral anal setae; peritrematal shields without punctuation; lateral margins of tectum without spinules.

*Pachyseius huanrenensis* sp. nov. (Figs. 6-9)

Female. Idiosoma length 526, width 299, long oval. Dorsal shield complete, tilt-like reticulation and provided with 30 pairs of smooth setae.



Figs. 6-9. *Pachyseius huanrenensis* sp. nov. . 6. Dorsum. 7. Venter. 8. Chelicera. 9. Tectum.

Sternal shield length 130, width 113, reticulated and bearing 3 pairs of simple setae; anterior margin strongly sclerotized and with 1 pair of horn-like projections, posterior margin flat, reaching to the middle of coxae. Metasternal shields nearly circular, with 1 pair of simple setae. Genital shield length 114, width 68, reticulated and ax-like at the posterior part, with 1 pair of simple setae. Ventrianal shield holotype length 180, width 122, widest at 1/3 of anterior part; reticulated and rectangular,

2 pairs of preanal setae and 3 circumanal setae. 3 platelets in a row between genital shield and ventrianal shield. 1 pair of metapodal shields, rod-like. 7 pairs of simple setae on soft cuticle. Peritrematal shields developed, peritreme extending anteriorly to base of  $F_2$  setae.

Tectum rectangular, anterior margin with few denticles. Moveable digit 3 denticles, moveable digit shorter than fixed digit. Tarsus with 2 spines at apical

part.

Male. Unknown.

Holotype, from soil, Laotudingzi Natural Preserve, Huanren County (41°28'N, 125°33'E), Benxi City, Liaoning Province, Sep. 2005, coll. CHEN Wan-Peng and ZHANG Heng-Ming.

Etymology. The new species is named after the locality where the specimens were collected, Huanren County.

Remarks. The new species is similar to *Pachyseius angustus* Hyatt, 1956, but in the new species sternal shield anterior margin with 1 pair of horn-like projections, posterior margin flat; 7 pairs of simple setae on soft cuticle; genital shield with obviously reticulated; moveable digit 3 denticles, moveable digit shorter than fixed digit. In the latter species sternal shield anterior margin without any horn-like projections, posterior margin concaved; 11 pairs of simple setae on soft cuticle; genital shield with weakly reticulated; moveable digit 2 denticles, moveable digit and fixed digit with the same length.

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## 中国厚厉螨科二新种（蜱螨亚纲，中气门亚目）

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摘要 记述厚厉螨科 2 新种：长白厚厉螨 *Pachylaelaps changbaiensis* sp. nov. 和桓仁厚绥螨 *Pachyseius huanrenensis* sp. nov.，模式标本保存于辽宁省沈阳农业大学植物保护学院。

长白厚厉螨，新种 *Pachylaelaps changbaiensis* sp. nov. (图 1~5)

新种与 *Pachylaelaps grandis* Koroleva, 1977 相近，但新种雌螨生殖腹板具 3 对毛，仅在边缘有不明显的网纹；肛板 3 根围肛毛几等长；气门板具刻点；头盖边缘具齿。而后者生殖腹板具 2 对毛，具明显网纹；肛后毛短于肛侧毛；气门板不具刻点；头盖边缘不具齿。

关键词 蜱螨亚纲，厚厉螨科，厚厉螨属，厚绥螨属，新种，中国。

中图分类号 Q959.226

正模，副模 3，吉林省长白山自然保护区土壤，1995-09，殷绥公采。

桓仁厚绥螨，新种 *Pachyseius huanrenensis* sp. nov. (图 6~9)

新种与 *Pachyseius angustus* Hyatt, 1956 近似，但新种胸板前缘具两角状突，后缘平直；腹表皮毛 7 对；生殖板网纹明显；动趾具 3 齿，动趾明显短于定趾。而后者胸板前缘不具角状突，后缘凹陷；腹表皮毛 11 对；生殖板网纹不明显；动趾具 2 齿，动趾和定趾几乎等长。

正模，辽宁省本溪市桓仁县老秃顶子自然保护区土壤，2005-09，陈万鹏，张恒明采。